

# TOP 10 DISCOVERIES

ARCHAEOLOGY magazine's editors reveal the year's most exciting finds



T-pillars, Karahantepe, Turkey



## TALES FROM THE NEOLITHIC

Karahantepe, Turkey



**S**ince the first stone structures were unearthed at Karahantepe just six years ago, the site has continued to change the story of the people who lived in southeastern Anatolia in the Pre-Pottery Neolithic period (ca. 12,000 to 10,200 years ago). This year was no exception, thanks to a pair of unique discoveries. The first is a stone monument known as a T-pillar that includes a carved human face. The second is a collection of artifacts that archaeologist Necmi Karul of Istanbul University believes represents the world's oldest three-dimensional narrative. Both finds provide entirely new insights into how the region's Neolithic people envisioned themselves, as well as rich evidence of symbolic thought, which is scant in the archaeological record of this period.

T-pillars have been unearthed at multiple sites in the region and have long been thought to represent human figures. Until now, however, none had been found with a three-dimensional face. The newly discovered 4.4-foot-tall pillar carved from bedrock dates to the ninth millennium B.C. and was found with three other T-pillars in a domestic space. "The discovery of a face at the top of the pillar supports the view that they symbolized humans," says Karul.

In a deliberately buried and abandoned building elsewhere at the site, archaeologists unearthed a bottomless stone bowl inside which was a stone plate, stone batons, and a small bowl containing

a set of stone figurines representing a wild boar, a vulture, and a fox. These animals, Karul says, played a leading role in the stories of Neolithic people. The head of each 1.3-inch-tall figurine was encircled by a limestone ring, and Karul believes they were put in the bowl in a symbolic sequence. "The fact that the figurines were placed side by side and that each of their heads was inserted into a separate stone ring can be interpreted as different animals sharing the same fate, or witnessing the same event," he says. "Some structures were treated like mortal beings that were born, lived, and died, so finding this composition buried inside a building is likely related to the process of abandonment. What's truly remarkable here is the success of Neolithic people in conveying their emotions and messages."

—JARRETT A. LOBELL





## RETURN OF THE KING

Caracol, Belize



**A**fter more than four decades of excavation at the Maya site of Caracol, a team led by University of Houston archaeologists Arlen and Diane Chase made a first-of-its-kind discovery when they uncovered the tomb of Te' Kab Chaak, founder of the kingdom's ruling dynasty. It is exceedingly rare in Maya archaeology to be able to associate human remains with a historic figure known from hieroglyphic inscriptions. This is also the only tomb of a ruler to have been found in Caracol.

Te' Kab Chaak ascended to the throne in A.D. 331 and presided over Caracol in its early stages, before it grew into one of the most powerful Maya cities in the southern Yucatán Peninsula. The ruler's burial was unearthed in an area of the site that the Chases first investigated in 1993. This past year, the team revisited the location and detected a large void just below the spot where their earlier excavations had stopped. "There was a eureka-



Tomb of Te' Kab Chaak, Caracol, Belize

type moment when we stuck a measuring stick in, and it didn't touch the bottom," says Arlen Chase. "We knew there had to be something there, but the question was, how do we get in?"

When members of the team entered the void, they found a seven-foot-high rectangular burial chamber whose walls were covered with red cinnabar, evidence that the deceased was a person of importance. Artifacts on the chamber's floor included pottery vessels, jadeite jewelry, and carved bone tubes that the archaeologists have dated stylistically to the reign of Te' Kab Chaak, which ended around A.D. 350. The most exceptional object was a jade-and-shell mosaic death mask that once covered the face of the Maya king. "This discovery is both a story of how quickly things can happen, but also how much patience you need to have," says Diane Chase. "On one hand, it was more than a thousand years in the making, but for us, it was at least forty years."

—JASON URBANUS

# THE FIRST INDO-EUROPEAN SPEAKERS

Eastern Ukraine and Southern Russia



**E**ver since eighteenth-century scholars recognized that Latin, Greek, and Sanskrit all descended from a common language, researchers have been consumed with determining who first spoke this ancient tongue. Known as Proto-Indo-European, it is the common ancestor of all the languages that belong to the Indo-European language family, which include English, Hindi, Persian, and hundreds of others. Today, almost half the planet's population speaks one of these languages. An early form of Proto-Indo-European also contributed to the language that eventually became Hittite, which was spoken in Anatolia during the Bronze Age (ca. 3000–1200 B.C.) and was the first language from the family to be written.

Archaeological, linguistic, and genetic evidence suggests that a nomadic Bronze Age culture called the Yamnaya, who built massive burial mounds known as kurgans in the steppe north of the Black Sea, spoke a form of Proto-Indo-European. Beginning around 3100 B.C., the Yamnaya migrated as far as Bulgaria and western Siberia, spreading their language with them. But their links to the Hittite speakers of Anatolia have long

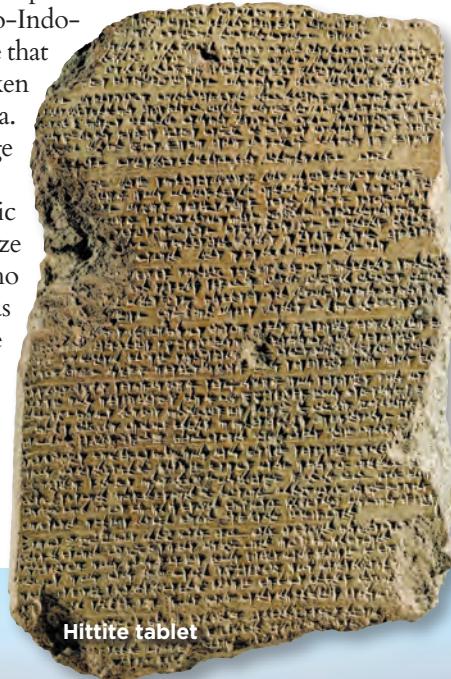
been mysterious, especially as previous genetic studies had established no links between the two cultures.

A new DNA study of more than 400 ancient people from eastern Ukraine and southern Russia shows that both the Yamnaya and ancestral Hittite speakers descended from an eclectic Eneolithic, or Copper Age (ca. 4500–3300 B.C.), population of steppe nomads and farmers from the north Caucasus. These people intermarried and buried their dead in small mounds reminiscent of later Yamnaya kurgans in

an area around the Volga and Don Rivers from about

4400 to 3300 B.C. "This study resulted in a fire hose of data that we'll be analyzing for years," says archaeologist David W. Anthony of Hartwick College. "But we can now say that the earliest form of Proto-Indo-European was almost certainly spoken by these Eneolithic people." Scholars still debate how ancestral Hittite speakers made their way from the steppe to Anatolia, but the new genetic data has helped refine the Yamnaya's ancestry. It suggests that these Proto-Indo-European speakers, whose ancestors went on to spread their languages across Eurasia, originally descended from a small clan of perhaps just 2,000 people living in what is now eastern Ukraine.

—ERIC A. POWELL



Yamnaya kurgan, Bulgaria



## CRETE'S INNER CIRCLES

Papoura Mountain, Greece



**O**n the summit of Papoura Mountain in central Crete, archaeologists are investigating a highly unusual circular structure. It was built by members of the Bronze Age Minoan culture (ca. 3000–1100 B.C.) and is thought to be the earliest monumental complex discovered on the island. Measuring more than 160 feet across, the complex was constructed atop sloping ground and consists of eight concentric stone walls, some preserved to a height of more than six feet. The outer rings form rooms of roughly equal size connected by small doorways. At the center of the structure, a team led by excavation director Danae Kontopodi and Vassiliki Sylaiakaki, director of the Ephorate of Antiquities of Heraklion, has unearthed a vaulted building divided into four sections whose plaster walls preserve traces of paint. The archaeologists believe the complex was constructed as early as 3000 B.C.—more than a millennium before the rise of the palace-based society that would come to dominate Minoan sociopolitical life—and used until about 1800 B.C. “The monument was clearly a communal undertaking, built to be visible from the settlements of the Pediada Plain below and the surrounding peaks and ridges,” Sylaiakaki says. “Its commanding presence would have made it a focal point for communities throughout the region.”

Minoans hailing from small rural sites and larger settlements likely congregated in a stone-paved area of the structure that was spacious enough to hold substantial crowds. The researchers believe that pottery found in the complex suggests that the network of people who gathered there may have included those from the palatial centers of Knossos and Malia on Crete’s north coast, some 20 miles away. “The circular monument served as a communal space for periodic feasting and ritual activities,” Kontopodi says, “but its function seems to have evolved according to geopolitical shifts and the social or spiritual needs of local communities.”

—BENJAMIN LEONARD

## OLDEST MUMMIFIED PEOPLE

Southern China and Southeast Asia



**W**hile excavating burials of hunter-gatherers in a cave in Vietnam, archaeologist Hsiao-chun Hung of the Australian National University wondered how to explain the flexed, folded, and contorted positions of some skeletons. She suspected these people had originally been mummified in a smoke-drying process, based on ethnographic reports of such



Bones with burn marks

## DINING WITH DIONYSUS

Pompeii, Italy



**I**nside a large house in a part of Pompeii called Regio IX, a team from the Archaeological Park of Pompeii unearthed a splendidly decorated dining room that eighteenth-century excavators had stumbled upon but largely ignored. Opening onto a garden, the vaulted room is lined with partially preserved columns painted a rich red that frame frescoed wall panels. Archaeologists were surprised to discover that the frescoes represent a rare example of a megalography—a group of paintings depicting nearly life-size figures, in this case part of the retinue of Dionysus, the god of wine. Researchers have dubbed the residence the House of the Thiasus, after the term for a Dionysian procession, and have dated the frescoes to between 40 and 30 B.C. on the basis of their style.

Among the revelers, who are perched atop painted statue bases, are satyrs playing double flutes and pouring libations of wine. There are also dancing women called maenads induced by Dionysus into an ecstatic state. In the center of the back wall, a woman is being led by a male attendant of the god to be initiated into his mystery cult. Women are also shown hunting, a theme that archaeologist Molly Swetnam-Burland of William & Mary says is underscored by depictions of both living and dead animals in painted friezes running above the main panels. “When we see real women



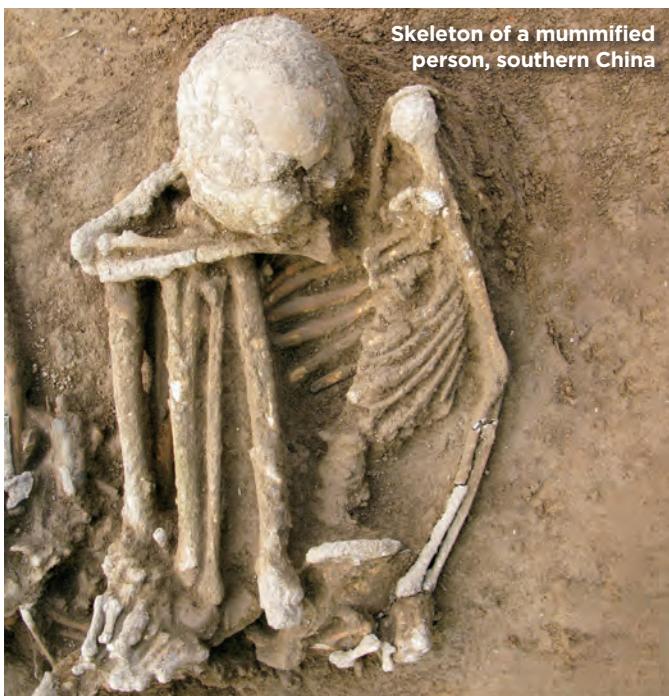
Fresco, House of the Thiasus

practices in Southeast Asia as recently as the twentieth century. To test the theory, Hung's team analyzed skeletal remains of 57 people found at 11 different sites across China, Vietnam, and Indonesia that date to between 10,000 and 2000 B.C. The researchers used techniques that involved bombarding the bones with X-ray beams and infrared light. Their results indicated that many bones had been heated at low temperatures. Some also had visible burn marks. The team concluded that the bodies had indeed likely been dried over fires.

Once mummified and bound, the bodies would have been light enough to move easily. "These hunter-gatherers might have been carrying ancestral people with them," says archaeologist Peter Bellwood, also of the Australian National University. "As the bodies decayed and fell apart, they decided to bury them." Some of the burials have been dated to approximately 10,000 years ago, making them the earliest known intentionally mummified people in the world. "What is striking," Hung says, "is how widespread this tradition seems to have been."

—BEN O'DONNELL

Skeleton of a mummified person, southern China



Fresco, House of the Thiasus, Pompeii, Italy

depicted in Roman houses, they're typically shown in more proper social roles," she says. "I find it interesting that in the House of the Thiasus, we have a celebration of the wildness of

women without showing the counterpoint—what they're supposed to be like when they're buttoned up in their daily lives."

—BENJAMIN LEONARD

# THE CASE OF THE MISSING PHARAOH

Thebes, Egypt



**A**t first, the team thought they had found a woman's tomb at the end of the 30-foot-long corridor filled nearly to the ceiling with fallen rock and flood debris. As they excavated the tomb chamber, however, they slowly amassed evidence indicating that wasn't the case. "We never dreamt that we had found a king's tomb, let alone the tomb of an Eighteenth Dynasty pharaoh," says Egyptologist Piers Litherland of the New Kingdom Research Foundation Mission to the Western Wadis.

Archaeologists saw small patches of painted plaster on the chamber's walls, and, in one corner, a tiny area of ceiling painted blue with yellow stars. Yet royal women's tombs from the 18th Dynasty (ca. 1550–1295 B.C.) were never decorated, and starred ceilings in particular were reserved for kings. On the chamber walls, the team also uncovered parts of the *Amduat*—a text that guided deceased pharaohs on their dangerous nighttime journey to reunite with the sun at dawn. During the 18th Dynasty, tomb illustrations of the *Amduat* were also the sole prerogative of pharaohs. Nonetheless, team members were hesitant to conclude that they had discovered a pharaoh's burial. "We initially explained the decorations as probably being exceptions to the rules which Egyptologists lay down," says Litherland. "I can't stress enough how reluctant one is to accept something as unusual as this. Your mind looks for any other explanation, because the implications of thinking this was a king's tomb are too immense."

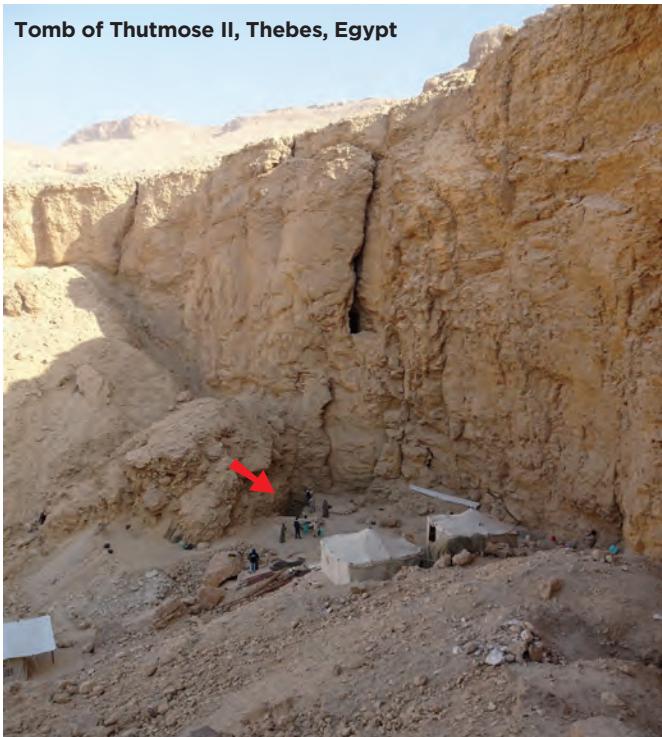
It took one more piece of evidence for the team to be certain they had discovered not just any pharaoh's tomb, but



Starred ceiling, Tomb of Thutmose II, Thebes, Egypt

that of Thutmose II (reigned ca. 1492–1479 B.C.), the fourth ruler of the dynasty that included the pharaohs Amenhotep III, Akhenaten, and Tutankhamun. They were able to reassemble fragments of an alabaster jar that includes a dedication reading the "great chief wife, his beloved...Hatshepsut made this monument for her brother, the king of Upper and Lower Egypt, Aa-khper-er-en-re, true of voice." The only pharaoh to have been married to Hatshepsut was her half-brother Thutmose II. Later, the archaeologists found the curved rim of another alabaster jar that contained a nearly identical dedication from the queen to her husband. The last undiscovered tomb of an 18th Dynasty pharaoh had finally been found.

—JARRETT A. LOBELL



Rim of alabaster jar with name of Thutmose II



Fragment of the *Amduat* from Tomb of Thutmose II



## HYMN TO BABYLON

Sippar, Iraq



**A**lthough archaeologists have excavated 500,000 cuneiform tablets from Mesopotamian sites over the last two centuries, about half of these texts now in museums around the world haven't been thoroughly studied or published. It is only by applying new technology that scholars will be able to even make a dent in this huge number. This year's success story is a newly deciphered, previously unknown hymn extolling Babylon as the first city in existence. The hymn also praises Babylon's citizens and their patron deity, Marduk. "It's a text that tries to indoctrinate you in the love of your city," says Assyriologist Enrique Jiménez of Ludwig Maximilian University.

Jiménez and Assyriologist Anmar Fadhil of the University of Baghdad studied a large section of a tablet containing part of the hymn held by the Iraq Museum that was excavated in the 1980s from the library in the ancient city of Sippar. After transliterating the text, they used artificial intelligence models to search for overlaps with other tablets. The researchers identified 30 fragments from 20 different tablets containing sections of the hymn. Without the assistance of artificial intelligence, this process would have taken years, if not decades—or been impossible. "In the past 150 years of cuneiform studies, researchers found around 6,000 places where tablet fragments joined," Jiménez says. "We've found 1,500 in the last five years."

Jiménez and Fadhil have thus far recovered about two-thirds of the hymn, which they estimate originally totaled around 250 lines, and which was likely composed in the second half of the second millennium B.C. In addition to the panegyric to Babylon, the hymn contains many previously unknown pieces of information, such as an enumeration of the duties of Babylonian priestesses, who, according to the text, also served as midwives. In contrast to most Mesopotamian literature, the king is not a central figure in the hymn. "It's interesting that the Babylonians present themselves as a group, and the perspective of the king isn't there," says Jiménez. "They say, 'We are older than any king that may come. Kings come and go, but the Babylonians will always stay.' That's a very cool thing."

—BENJAMIN LEONARD

Hymn tablet held by the Iraq Museum





Wooden mirror



Earspool inlaid with shells and semiprecious stones

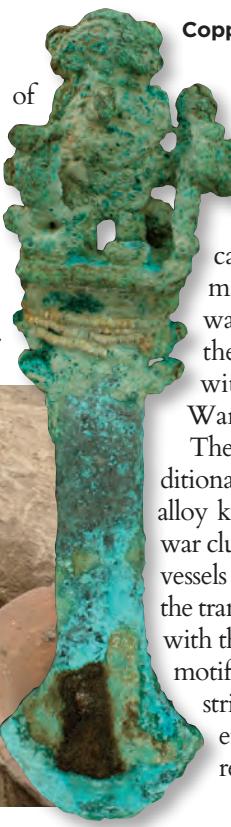
## THE WINDS OF CHANGE

Huanchaco, Peru

**A**luxurious burial at the site of Pampa la Cruz dating to between A.D. 850 and 1000 provides a window into an era when older cultures' control of the northern Peruvian coast was waning, and the influence of newer ones was ascending. "This extraordinary burial exhibits a distinctive hybrid art style that reflects a marked influence of



Pottery vessels, Pampa la Cruz, Peru



Copper alloy knife

the highland Wari society on well-established local cultural traditions, such as those of the Moche," says archaeologist Gabriel Prieto of the University of Florida. The grave contained two older men, one seated with his legs in a lotus position, a typical Wari pose. The man was buried with a wooden mirror shaped like an anthropomorphic crab, which was crafted using Wari techniques but rendered in the local Moche style. He also had an earspool inlaid with semiprecious stones and exotic shells that features Wari-style depictions of animals.

The second man was also interred in a seated position traditional for the highlands. His grave goods included a copper alloy knife depicting an anthropomorphic figure holding a war club crafted in a distinctive Moche artistic style. Ceramic vessels buried with both men provide additional examples of the transitional nature of this period. For example, a pot found with the man in the lotus position reflects typically highland motifs on a type of vessel that is neither strictly highland nor strictly Moche. "The Pampa la Cruz discovery," says Prieto, "represents a pivotal moment of social and political reconfiguration on the north coast of Peru."

—JARRETT A. LOBELL

# A FEMININE TOUCH

Çatalhöyük, Turkey



The large Neolithic farming community of Çatalhöyük in southern Anatolia has long tantalized archaeologists as a possible example of a matriarchal society. This interpretation was based on the discovery of figurines at the site with exaggerated female anatomy identified as “fertility goddesses.” Some scholars have advanced the theory that these sculptures were worshipped by members of “mother goddess” cults. Until recently, however, there had been no evidence that either men or women at Çatalhöyük had higher social status. A major genetic study has now convincingly demonstrated that a female-centered social structure pervaded the community.

A team of researchers analyzed DNA from 131 people buried in 35 houses on Çatalhöyük’s east mound, which was inhabited from around 7150 to 5950 B.C. The genetic material was primarily obtained from the petrous bone in the skull, which protects the inner ear, and some was extracted from teeth. The hardness and density of both the petrous bone and teeth can preserve DNA for an

extremely long duration. Researchers have been able to use DNA to identify the biological sex of infant and child burials at Çatalhöyük for the first time, a determination they were unable to make from skeletal remains alone. Armed with this information, they found that female babies and children were five times as likely to be favored with grave goods as their male counterparts. “It seems to have been a very strong practice and custom,” says Mehmet Somel, an evolutionary geneticist at Middle East Technical University.

The team’s analysis also showed that people buried in a given house tended to be related along the maternal line, suggesting that women remained connected to their homes while men moved away to join their partners’ households. Eren Yüncü, also an evolutionary geneticist at Middle East Technical University, says it’s unclear what consequences organizing society around females and favoring them with grave goods had in Çatalhöyük. She suggests it may have prevented the development of social stratification.

“Perhaps having more female-centered practices,” Yüncü says, “as well as the fact that perhaps females had more say in social affairs, might have helped maintain more egalitarian relationships.”

—DANIEL WEISS

Female figurine from Çatalhöyük

